

ABSTRACT

This invention relates to the field of signal transit time sensors, in particular sensors based on ultrasonic transit times. Existing electronic control circuits for such transit time sensors for measurements on medical liquids, in particular blood, are extremely complex or their time resolution is limited. However, the present invention makes use of a simple measurement technique which cannot be used directly at first for the time resolution to be achieved. In this method, an ordinary sampling method is used to detect the received signal (12). An oscillator-like received signal (12) generated by an emitted step-like signal is first sampled during a half-period (14, 15) and is checked with the help of a selection criterion. Only when the result of this check is positive is at least one interpolated or extrapolated contact point (20, 21) of the received signal (12) with a resting level (11) determined in a received signal-time diagram with the help of which the signal transit time or the change in signal transit time is determined.